

**REMARKS**

Applicant appreciates allowance of claims 13-16 and claims 18-27. Applicant also appreciates the Examiner's conditional allowance of claims 8-12 if re-written to include the subject matter of the base claim.

This agent left a voicemail message with M. Petravik on Dec 17, 2003 at 703-305-0047 regarding an apparent reference error in the office action. No response was received to date. Applicant hereby assumes that references to claim "7" in the action are actually directed at claim "6" as claim 7 and 17 were cancelled in the previous response. Examiner did acknowledge cancellation of claims 7 and 17 in the OA summary page, item by their omission from claims pending in the application.

Applicant maintains that the amendments previously made to claim 6 make it allowable. Claims 8-12 should also be allowable as being dependent on an allowable claim 6.

Applicant suggests that the amendments made herein to claims 1 and 4 make them allowable.

**Rejection under 35 USC 102(b) – Anticipation - Menton**

Apparatus claims 1-6, 10 are rejected as being anticipated by Menton. Claim 7 was previously cancelled. Per MPEP 2131, a claim can be anticipated only if each and every element as set forth in the claim is found .... in a single prior art reference.

As amended previously, claim 6 recites the limitation that the drill bit co-rotates with the housing

"at a rotation speed at least equal to the rotational speed of the housing", and further recites

"for periodically and rotatably impacting the drill bit to increase drilling torque.

Examiner acknowledges that Applicant can distinguish Menton by her allowance of claims 13 and 18 and at paragraph 6 of the office action, including stating:

"Applicant's claim does not recite that the bit must always be rotating at a speed at least equal to the rotational speed of the housing ...".

With respect, applicant claim 6, as amended previously, uses the same language as that requested by the Examiner "at a rotational speed at least equal to the rotation speed of the housing" and further identifies that the action imparted to

the bit is to rotatably impact the bit from a normal state of being rotated at a speed at least equal to the rotation speed of the housing.

As stated earlier, Menton's bit 16 and housing anvil 12 slows in rotation relative to the collar 36 and hammer 14, the hammer cam's 20 sloped face 24 climbs up the anvil cam's 22 sloped face 24 in order to effect an axial impact.

Menton's bit does not and CANNOT rotate "at a rotational speed at least equal to the rotational speed of the housing" as recited in claim 6 because if it did it would be inoperative – having no mechanism to cause impact without Menton's bit rotating at least SLOWER than the speed of Menton's housing. The element of "a rotation speed at least equal to the rotation speed of the housing" is not found in Menton and thus claim 6 cannot be anticipated.

Claim 6 should be in condition for allowance as previously amended. Accordingly, claims 8-12 should also be in condition for allowance as being dependent upon an allowable claim.

The method claims 1 and 4 have been further amended at the "imparting the potential energy" step so as to clarify the aspect wherein the bit is rotated at a rotational speed at least equal to the rotation speed of the housing.

As previously amended, claims 1 and 4 already state "driving a drill bit at a rotational speed at least equal to the rotation speed of the housing" and have been further amended to state "for periodically driving the drill bit at a rotational speed greater than that of the housing" further clarifying the unique "at least equal" effect of the invention which is an element not found in Menton.

Examiner has allowed claims 13-16 and 18-27. Further, in view of the foregoing remarks, reconsideration and allowance of claims 1-6 and 8-12 is also respectfully requested.

This response is provided within 2 months and a notice of allowance is requested. Considering that this application is under a final office action, if there are any issues that can be dealt with in a teleconference, this agent invites such a teleconference with the Examiner. This agent can be contacted at (403) 203-0107 (Mountain Standard Time, -2 hours).

Respectfully submitted,

  
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Date:

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